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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,489

01/30/2007

Hajime Kimura

101437.57334US

2069

23911 7590 07/21/2009  
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EXAMINER

WILSON, GREGORY A

ART UNIT

PAPER NUMBER

3749

MAIL DATE

DELIVERY MODE

07/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,489	<b>Applicant(s)</b> KIMURA ET AL.	
	<b>Examiner</b> Gregory A. Wilson	<b>Art Unit</b> 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities: in line 3, change “though” to –through--. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over (**JP 2001-324102**). **JP 2001-324102** discloses a boiler apparatus for leading fluid from a plurality of upper walls (13, 9, 15) to a ceiling wall (27) through a ceiling wall inlet header (unnumbered) and for leading fluid from a nose wall (11) to auxiliary side walls (31) through outlet connecting ducts (unnumbered), wherein a ceiling wall inlet mixing header (SEE Figure) having a plurality of holes on one and the same line near one end for the ceiling wall inlet mixing header for receiving connections from the plurality of upper walls wherein the fluid coming from the nose wall is not introduced into the ceiling wall inlet mixing header (SEE Figure), is installed between the plurality of upper walls and the ceiling wall inlet header, the upper walls are connected to vicinities of one end

Art Unit: 3749

portion of the ceiling wall inlet mixing header through mixing header inlet connecting ducts while the ceiling wall inlet header is connected to vicinities of the other end portion of the ceiling wall inlet mixing header through mixing header outlet connecting ducts; the ceiling wall inlet mixing header is installed substantially in a central portion in a furnace width direction, and the mixing header outlet connecting ducts are disposed substantially symmetrically with respect to the ceiling wall inlet mixing header (SEE Figure). The Japanese references does not particular teach the shape of the ceiling wall inlet mixing header being bent in an L-shape. Having a bent L-shape configuration represents a size variation (or shape variation) wherein such a modification to the ceiling wall inlet mixing header of JP 2001-324102 would generally be recognized as being within the level of ordinary skill in the art, additionally, it would have been an obvious matter of design choice, since the applicant has not disclosed that having a bent ceiling wall inlet mixing header solves any stated problem in a new or unexpected way or is for any particular purpose which would be considered non-obvious to one of ordinary skill in the art and it appears that the boiler apparatus of JP 2001-324102 would perform equally well with a ceiling wall inlet mixing header of various shapes.

### ***Response to Arguments***

Applicant's arguments filed 6/12/09 have been fully considered but they are not persuasive. The applicant submits that prior art reference JP2001-324102 does not disclose or suggest the construction of the applicants invention, while the examiner can agree that this may be true in part, the examiner takes the position that JP2001-324102

Art Unit: 3749

teaches structure which is obvious over the applicants invention. The applicant makes the argument that because of the bent configuration of the mixing header, that the length L2 occupied by the ceiling wall inlet mixing header 8 can be made substantially shorter than length L1, which would be occupied by the header 8 if it were extended like a straight line, while still maintaining the length of the fluid mixer region with the benefit of such a construction being that the apparatus can be made compact. For the design purposes of having a more compact structure, a person having ordinary skill in the art attempting to solve the problem of a limiting the space requirement of a ceiling wall inlet mixing header and corresponding structure would have been led to try a number of structural configurations of bent mixing tubes/headers, choosing from a finite number of possibilities, predictable solutions, with a reasonable expectation of success. Changing a straight tube to a bent tube to achieve the same function but in a more compact structure constitutes a predictable variation which would be obvious to a person having ordinary skill in the art. In addition, the applicant argues that this bent design provides for changing the direction of the flow of the fluid, however, evidence of such a benefit are not found in the applicants specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. Wilson whose telephone number is (571)272-4882. The examiner can normally be reached on 7 am - 4:30 pm EST.

Art Unit: 3749

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory A. Wilson/  
Primary Examiner, Art Unit 3749  
July 18, 2009